



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 W. JACKSON BLVD  
CHICAGO, IL 60604

US EPA RECORDS CENTER REGION 5



475510

**MEMORANDUM**

**SUBJECT:** Action Memorandum: Request for Approval and Funding for an Emergency Removal Action at the Lawrence Hardware Site, Sterling, Whiteside County, Illinois (Site ID # C5X6)

**FROM:** Ramon C. Mendoza, On-Scene Coordinator *MCM*  
Emergency Response Branch 2 - Response Section 3

**THRU:** Samuel Borries, Chief *Samuel Borries*  
Emergency Response Branch 2

**TO:** Richard C. Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this Action Memorandum is to document the decision to initiate an emergency removal action described herein for the Lawrence Hardware Site (Site) located at 2 First Avenue in Sterling, Whiteside County, Illinois, and a ceiling not to exceed \$55,000.

The response action was necessary to mitigate the immediate threat to public health, welfare, and the environment posed by the unsecured hazardous substances including sulfuric acid, cyanide, PCBs, xylene, naphthalene, and sodium hydrosulfide. The response action was conducted from May 1 to June 10, 2014.

This Action Memorandum will serve as approval for expenditures by EPA, as the lead technical agency for actions described herein to abate the imminent and substantial endangerment posed by hazardous substances at the Site. The removal of hazardous substances was taken pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and 40 C.F.R. § 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to abate or eliminate the immediate threats posed to public health and/or the environment.

## **II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID# ILN000501562

State ID (LPC#): 1950505002

Category: Emergency Removal

### **A. Site Description/Background**

According to Historical Sanborn Fire Insurance Maps, the Site was undeveloped prior to 1891. From 1891 to before 1916, the Site contained several small commercial and industrial buildings including a sled and wagon works, a boat house, an ice cream factory, and an ice house. In 1913, the present day multi-story building was constructed and operated by Lawrence Brothers, Inc., a hardware manufacturer. Lawrence Hardware, Inc. operated the facility until its bankruptcy in 2001. LB Acquisition Co. LLC acquired title to the property in 2001; the City of Sterling, Illinois acquired the Site due to delinquent taxes in 2010 and is the current owner. The Site is part of a continued downtown development plan for the City of Sterling.

Lawrence Hardware, Inc. manufactured numerous products including metal door hinges, hinge pins, steel barn door hangers, bolted wheelbarrows, hay fork pulleys, and nails. On-site operations included wastewater treatment, plating, machining, and paper box manufacturing.

On August 18, 2013, trespassers entered the Site and started a fire on the first floor in the west region of the building. While responding to the fire, the local fire department and Illinois State Fire Marshall observed drums and containers containing suspected hazardous waste. On September 10, 2013, Illinois Environmental Protection Agency (IEPA) and City of Sterling personnel conducted a reconnaissance at the Site and observed approximately 40 drums scattered throughout the building. Though not all the drums contained material, some were labeled "acid" and "caustic." A small laboratory containing numerous bottles of chemicals was also identified. EPA and City of Sterling personnel observed signs of vandalism and human intrusion, including numerous broken windows through which people could enter the building.

On September 12, 2013, Bruce Everetts of the IEPA Office of Site Evaluation sent a letter to EPA requesting a time-critical removal assessment and possible removal action at the Site. The letter states that the Site posed a threat to the surrounding area due to the presence of unknown contaminants found within the drums, vats, and other containers, as well as the persistent vandalism to the building.

### **1. Removal Site Evaluation**

On December 4 and 5, 2013, EPA and its contractor conducted a site assessment to document Site conditions and evaluate the Site for a potential time-critical removal action. EPA observed that the Site was abandoned, with the access road to the Site's parking area from First Avenue locked with a chain-link fence. They also observed evidence of trespassing and vandalism as broken windows and graffiti were present on every floor of the building. Upon entering the building, EPA and its contractor conducted air monitoring using a MicroR gamma radiation detector, a single-gas hydrogen cyanide meter, and a MultiRAE five-gas air monitor to monitor

air in the breathing zone for carbon monoxide, hydrogen sulfide, lower explosive limit, oxygen, and volatile organic compounds (VOC). All ambient air monitoring readings were at or below background levels.

EPA documented numerous tanks, vats, drums, and small containers on the first floor in the west region of the Site building. These containers appeared to be associated with on-site plating, waste treatment, and laboratory operations. Container labels included "Corrosive," "Flammable," "Combustible," "Acid," and "Potassium Ferro Cyanide Solution." Several containers showed signs of fire damage, including 55-gallon drums labeled "Corrosive." In addition, an approximately 30-gallon container labeled "Sodium Hydrosulfite" was adjacent to the area where the fire burned, and was less than 10 feet from an approximately 200-gallon aboveground storage tank (AST) labeled "Acid" and "Corrosive." The evaluation also revealed additional tanks, drums, totes, and small containers throughout the remainder of the Site building, many of which were open and deteriorating, as well as approximately ten 55-gallon drums and 30 small containers of used oil.

At several locations throughout the building, EPA and its contactors observed spills of unknown liquids and solids on the floor. On the first floor east side in the former boiler room lay a large pile of gray and black ashy material (about 100 cubic yards), which appeared to be associated with boiler operations. Switches containing elemental mercury associated with the Site building's boilers were also present. On the roof of the Site building, they observed 12 transformers containing transformer oil, suspected to contain polychlorinated biphenyls (PCB). A 13th transformer had already fallen down and released its contents on the ground. The deteriorated condition of the transformer mounts posed a risk that more transformers could fall and release suspected PCBs into the environment.

EPA submitted waste liquid and solid samples under chain-of-custody to ALS Laboratory Group of Holland, Michigan for analysis for one or more of the following: flashpoint, pH, Toxicity Characteristic Leaching Procedure (TCLP), volatile organic compounds (VOC), TCLP semivolatile organic compounds (SVOC), Target Compound List (TCL), TCL SVOCs, Target Analyte List (TAL) metals, PCBs, and total petroleum hydrocarbons (TPH) gasoline-range organics (GRO), diesel-range organics (DRO), and oil-range organics (ORO).

## **Results:**

### **Containers:**

#### **pH (Corrosivity) :**

- Waste liquid samples LH-WL01-124013 and LH-WL02-120413 had pH values of 0.15 and less than (<) 1 standard unit (SU), respectively. According to 40 CFR 261.22, a pH value of greater than or equal to 12.5 SUs or less than or equal to 2 SUs exhibits the characteristic of corrosivity. Therefore, these two samples meet the definition of hazardous waste for the characteristic of corrosivity. The waste liquid samples were identified as sulfuric acid and were found in two drum containers totaling about 80 gallons.

**Total Cyanide:**

- Liquid waste sample LH-WL04-120413 contained total cyanide at concentrations of 11,000 milligrams per liter (mg/L). This liquid waste sample represents a cyanide-bearing waste. (Sample from a quart size bottle in the lab).

**VOCs:**

- Liquid waste sample LH-WL03-120413 contained ethylbenzene and xylenes (total) at concentrations of 300 and 1,400 mg/L, respectively. (Sample from a 5 gallon container marked flammable).

**SVOCs:**

- Liquid waste sample LH-WL06-120413 contained 2-methylnaphthalene, bis(2-ethylhexyl)phthalate, and naphthalene at concentrations of 82, 22 and 260 mg/L, respectively. (Sample from an open 5 gallon bucket, green/amber viscous liquid.)
- Liquid waste sample LH-WL08-120413 contained bis(2-ethylhexyl)phthalate detected at a concentration of 85 mg/L. (Sample from unlabeled 3ft x 6 ft. pan)
- Liquid waste sample LH-WL08-120413D contained bis(2-ethylhexyl)phthalate detected at a concentration of 100 mg/L.

**PCBs:**

- PCBs were detected in transformer oil from 5.4 to 44 mg/kg.

**Ash Pile Results:**

Solid waste sample LH-WS01-120413 contained aluminum at 790 mg/kg; arsenic at 9.5 mg/kg; barium at 39 mg/kg; calcium at 3,400 mg/kg; chromium at 18 mg/kg; copper at 84 mg/kg; iron at 42,000 mg/kg; lead at 140 mg/kg; magnesium at 700 mg/kg; manganese at 100 mg/kg; nickel at 11 mg/kg; potassium at 600 mg/kg; selenium at 3.5 mg/kg; sodium at 1,100 mg/kg; vanadium at 19 mg/kg; and zinc at 55 mg/kg.

**1.1 Removal Site Evaluation : History and Threat Of Arson**

The Site was referred to EPA after fire fighters discovered suspected hazardous waste in response to an arson fire caused by trespassers in August 2013. EPA conducted its site assessment in December of 2013 and documented hazardous substances including the following: at least two drums of sulfuric acid, lab waste including cyanide, containers of reactive waste, solvents, at least 12 drums of contaminated used oil and another 12 transformers suspected of containing PCBs. In addition there were at least three industrial size mercury switches. On April 4, the City of Sterling reported another break-in by trespassers, highlighting the lack of effective controls to prevent trespassers from going on the Site and setting another fire.

## **2. Physical Location**

The Site is located at 2 First Avenue, Sterling, Whiteside County, Illinois. The Site sits along the north bank of the Rock River with approximate geographical coordinates of 41°47'11.31" north latitude and 89°41'32.28" west longitude. The City of Rock Falls is directly across on the south bank of the river.

EPA conducted an Environmental Justice (EJ) analysis for the Site using Region 5's EJ Screen Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Region 5 has reviewed environmental and demographic data for the area surrounding the Site and determined there is a low potential for EJ concerns at this location.

## **3. Site Characteristics**

The Site is an abandoned hardware store facility which consists of a multi-story building occupying approximately 3.5 acres. Evidence of past activities were found including: 1) office space; 2) storage space; 3) small scale metal plating operations; 4) metal work/machining operations; 5) boiler/furnace operations; and 6) waste water treatment plant.

The Site is bordered to the north by a Union Pacific Railroad, with commercial and industrial properties and East 2<sup>nd</sup> Street beyond; to the east by undeveloped land; to the south by the Rock River and the City of Rock Falls, Illinois; and to the west by First Avenue/Illinois Route 40 with industrial properties beyond. In 2010, approximately 10,791 people lived within a 1-mile radius of the Site according to EPA's EJView Mapper. The nearest residential property is approximately 0.13 miles from the Site.

The Site is located in a special flood hazard area subject to inundation by the 1% annual flood chance (100-year flood), according to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Number 17195C0237E. The City of Sterling's Public Works Director reported that the Rock River flooded as recently as March 2013. According to the Illinois Inland Sensitivity Atlas, there is an aquatic zone in the Rock River downstream of the Site containing sensitive invertebrate species: 1) State threatened black sandshell mussel (*Ligumia recta*) in close proximity to the Site; 2) federally endangered sheepsnose mussel (*Plethobasus cyphus*) 6 miles downstream of the Site.

## **4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant**

The hazardous substances, pollutants, or contaminants present at the Site, as defined by Section 101(14) of CERCLA, including sulfuric acid, cyanide, elemental mercury, volatile organic compounds (xylene), PCBs, and semi-volatile organic compounds (naphthalene), coupled with the events of arson, trespass, and threat of flooding, constituted the threat of release of hazardous substances, pollutants, or contaminants at the Site.

## 5. NPL Status

The Site is not on the National Priorities List, nor is it anticipated to be referred to the NPL site assessment program.

## 6. Maps, Pictures and Other Graphic Representations

Attachment 1 Site /Location Map

Attachment 2 Sensitivity Atlas, Legend, U.S. Fish & Wildlife Service Letter

Attachment 3 Detailed Cleanup Contractor Cost Estimate

Attachment 4 Independent Government Cost Estimate

Attachment 5 Administrative Record

### B. Other Actions to Date

#### 1. Previous Actions

EPA's prior activity regarding this Site was the removal assessment conducted in December of 2013, as described in Section 1.

#### 2. Current Actions

EPA completed the removal assessment on the Site and prepared a Site Assessment report with the contractor. After receiving the notification of another break-in by trespassers on April 4, 2014, EPA decided to conduct an emergency removal action under CERCLA to address the risk of a potential release of hazardous substances. The emergency removal action was conducted from May 1 to June 10, 2014, during which the following hazardous substances and solid wastes were collected, tested, consolidated, then transported and disposed (unless noted) at a CERCLA approved facility off-site:

Waste Stream	Amount/Volume	Manifest #	Disposal Facility	Comments
Latex Paint	1 cubic yard Box	013010735 JJK	Petro-Chem Processing Group421 Lyncaste Detroit, MI (PCPG)	
Acid Liquids	3-55 gallon drums	013010735 JJK	PCPG	
Neutral Liquids	2-55 gallon drums	013010735 JJK	PCPG	
Spray booth Filters	2-55 gallon drums in overpacks	013010735 JJK	PCPG	
Oxidizer Lab pack	1-5 gallon pail	013010735 JJK	PCPG	
Base liquids	1-55 gallon drum	013010735 JJK	PCPG	
Non-PCB Transformer Oil (< 50 ppm PCBs)	13-55 gallon drum	013010735 JJK	PCPG	PCB concentrations in oil ranged from 5.4 to 44 mg/kg
Contaminated	11-55 gallon	013010735 JJK	PCPG	

Used Oil	drums			
Viking Foam(Antifoam)	1-55 gallon drum	013010735 JJK	PCPG	
Boiler Cleaner	1-5 gallon pail	013010735 JJK	PCPG	
Ferrocyanide Lab Pack	1-5 gallon pail	013010735 JJK	PCPG	
Oil Base Paint	1 cubic yard box	013010735 JJK	PCPG	
Friable Asbestos Insulation	1- 5 gallon pail	013010735 JJK	PCPG	
Sodium Hydrosulfite	1-30 gallon drum	013010735 JJK	PCPG	Over-packed in a 55 gallon drum
RCRA Empty Containers and Solid Waste	1 ton (roll-off box)	LH001	Republic Services Landfill, Dixon, IL	
Mercury Switches	Includes two industrial size switches and 5 home-sized switches (estimate 3-5 ounces).		Waste Management Mercury Solutions, Union Grove, WI	Elemental Mercury was recycled.

In addition, the access doors to the ash pile room were secured to eliminate the threat of ash escaping into the river in a flood, causing damage to threatened and endangered mussel species.

### **State and Local Authorities' Roles**

#### **1. State and local actions to date**

As described in Section II, A., the City of Sterling owns the Site due to a tax default and it is part of a continued downtown development plan. The local fire department and Illinois State Fire Marshall responded to an arson fire in August of 2013. On September 10, 2013, IEPA and City of Sterling personnel conducted a reconnaissance at the Site. On September 12, 2013, the IEPA Office of Site Evaluation requested a time-critical removal assessment and possible removal action at the Site due to the threat to the surrounding area from the presence of unknown contaminants and the persistent vandalism to the building. The City Public Works tried to secure the Site with chains and locks on doors and concrete blocks on the warehouse entrance, but on April 4, 2014, the City reported another break-in by trespassers to the Site.

#### **2. Potential for continued State/local response**

IEPA referred the Site to EPA for a removal evaluation. State and local authorities do not have the financial resources to clean up this Site.

### **III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The conditions at the Site presented an imminent and substantial threat to the public health, or welfare, and the environment, and met the criteria for a removal action provided for in the NCP, 40 C.F.R. § 300.415(b)(2), as follows:

- a. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;**

Analytical results from samples collected during the removal site evaluation and emergency removal found abandoned tanks, drums, and other containers which contained hazardous substances including sulfuric acid, cyanide, xylene and naphthalene, PCBs and elemental mercury. In addition, about 100 cubic yards of ash was found inside the building in a room within the Boiler area.

The Site is on the Rock River in an industrial, commercial, and residential area of Sterling, Illinois. In 2010, approximately 10,791 people lived within a 1-mile radius of the Site; the nearest residential property is approximately 0.13 miles away. Doors of the Site were locked but persons were still able to enter the building, once starting a fire. As a result, an accidental or intentional release of hazardous materials, contact with hazardous materials, and reactions that generate toxic gases was possible. The presence of cyanide and acids, for example, presented a risk that hydrogen cyanide gas could have been produced and released into the surrounding community.

According to the Illinois Sensitivity Atlas, an aquatic zone in the Rock River downstream of the Site contains sensitive invertebrate species that could be harmed if hazardous substances and ash entered the water column through a spill or a flood. Consistent with CERCLA 101(33), the ash is a pollutant which presents a threat of release to the environment.

The hazardous substances present at the site present risks as well:

Sulfuric Acid - Sulfuric acid is a clear, colorless, oily liquid that is very corrosive. Sulfuric acid dissolves in the water in air and can remain suspended in the air for varying periods of time. Also, this acid can cause burns to the skin, eyes, lungs, and digestive tract. Severe exposure can result in death.

Cyanide - Cyanide compounds are used in plating baths because they accommodate a wide range of electrical current, remove tarnish and other undesirable films from surfaces to be plated, and cause the formation of even metal deposit that has lower sensitivity to impurities. Cyanide exposure pathways include inhalation, ingestion, and absorption through skin or mucous membranes. Most cyanides are acutely poisonous. Cyanide is extremely toxic to humans. Acute (short-term) inhalation exposure to 100 milligrams per cubic meter (mg/m<sup>3</sup>) or more of hydrogen cyanide will cause death in humans. Acute exposure to lower concentrations (6 to 49



mg/m<sup>3</sup>) of hydrogen cyanide will cause a variety of effects in humans, such as weakness, headache, nausea, increased respiration rate, and eye and skin irritation. Chronic exposure to cyanide in humans through inhalation results in central nervous system effects, such as headaches, dizziness, numbness, tremor, and loss of visual acuity. Other effects in humans include cardiovascular and respiratory effects, enlarged thyroid gland, and irritation of the eyes and skin.

Elemental Mercury- Mercury is a hazardous substance, as defined by Section 101(14) of CERCLA and is specifically listed as a hazardous substance (U151) under 40 C.F.R. § 302.4. Mercury also exhibits the RCRA characteristic for toxicity (D009) under 40 C.F.R. Part 261. Elemental (metallic) mercury causes health effects when it is breathed as a vapor where it can be absorbed through the lungs. These exposures can occur when elemental mercury is spilled or products that contain elemental mercury break and expose mercury to the air, particularly in warm or poorly-ventilated indoor spaces. Symptoms include these: tremors; emotional changes (e.g., mood swings, irritability, nervousness, excessive shyness); insomnia; neuromuscular changes (such as weakness, muscle atrophy, twitching); headaches; disturbances in sensations; changes in nerve responses; performance deficits on tests of cognitive function. At higher exposures there may be kidney effects, respiratory failure, and death.

Xylene - Xylene is a colorless, sweet-smelling liquid that catches on fire easily. It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. It is one of the top 30 chemicals produced in the United States in terms of volume. Xylene is used as a solvent, as a cleaning agent, a thinner for paint, and in paints and varnishes. High levels of exposure for short or long periods can cause headaches, lack of muscle coordination, dizziness, confusion, and changes in one's sense of balance. Exposure to high levels of xylene for short periods can also cause irritation of the skin, eyes, nose, and throat; difficulty in breathing; problems with the lungs; delayed reaction time; memory difficulties; stomach discomfort; and possibly changes in the liver and kidneys. It can cause unconsciousness and even death at very high levels. The Occupational Safety and Health Administration has set limits of 100 parts xylene per million parts of workplace air (100ppm) for 8 hour work shifts in a 40 hour work week.

Naphthalene - Naphthalene is used in the production of phthalic anhydride; it is also used in mothballs. Acute (short-term) exposure of humans to naphthalene by inhalation, ingestion, and dermal contact is associated with hemolytic anemia, damage to the liver, and neurological damage. Cataracts have also been reported in workers acutely exposed to naphthalene by inhalation and ingestion. Chronic (long-term) exposure of workers and rodents to naphthalene has been reported to cause cataracts and damage to the retina. Hemolytic anemia has been reported in infants born to mothers who "sniffed" and ingested naphthalene (as mothballs) during pregnancy. Available data are inadequate to establish a causal relationship between exposure to naphthalene and cancer in humans. EPA has classified naphthalene as a Group C, possible human carcinogen.

Polychlorinated Biphenyls (PCBs): PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from

1929 until their manufacture was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. PCBs have been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.

**b. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release**

As discussed in Section II. A.1, "Removal Site Assessment," EPA documented numerous tanks, vats, drums, and small containers that appeared to be associated with on-site plating, waste treatment, and laboratory operations. Container labels included "Corrosive," "Flammable," "Combustible," "Acid," and "Potassium Ferrocyanide Solution." Several containers showed signs of fire damage, including 55-gallon drums labeled "Corrosive." Additional tanks, drums, totes, and small containers were observed throughout the remainder of the Site building, many of which were open and deteriorating.

Two waste liquid samples, LH-WL01-120413 and LH-WL02-120413, collected from an approximately 200-gallon AST and a 55-gallon drum had pH values below 2 SUs, meeting the definition of hazardous waste for the characteristic of corrosivity. A liquid waste sample LH-WL04-120413, collected from a container in the same region of the building, contained total cyanide at concentrations of 11,000 mg/L. The presence of cyanide, acids, and documented trespassing at the facility presented a reaction risk for producing hydrogen cyanide gas.

In addition, EPA documented the presence of an approximately 30-gallon container of sodium hydrosulfite in the same region of the Site building, located less than 10 feet from the approximately 200-gallon AST from which waste liquid sample LH-WL01-120413 was collected. Sodium hydrosulfite is a spontaneously combustible solid and an oxidizing material. Sodium hydrosulfite is reactive with acids, oxidizing agents, and moisture and can react violently with water to emit toxic gases, or it may become self-reactive under conditions of shock or increase in temperature or pressure. Sodium hydrosulfite is also air sensitive and will oxidize in air (more readily in the presence of moisture or when in solution) to bisulfite. For these reasons, EPA decided this container could not be safely sampled during the removal assessment. Each of these hazardous-waste containing containers were located on the same floor and in the same region of the Site building where trespassers entered the Site and started a fire on August 18, 2013, and around April 4, 2014. This floor is also about 10 feet above the normal level of the Rock River. In a flood scenario the hazardous waste may be released to the environment.

The proximity of these containers to an area where historic vandalism had occurred represented an increased threat of release at the Site. Trespassing could have resulted in an accidental or intentional release of hazardous materials, contact with hazardous materials, and a reaction that generated toxic gases. Continued deterioration of containers and falling transformers could result in releases of hazardous materials, contact with hazardous materials, fire, or reactions generating toxic gases. The close proximity of the Site to residential areas and commercial businesses increased potential threats to human health and the environment if a release had

occurred.

**c. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released**

Whiteside County, Illinois receives a substantial amount of precipitation and temperatures are normally below freezing during the winter, with regular snowfall. In the winter, the average temperature is 23°F and the average daily minimum temperature is 14°F. In the summer, the average temperature is 72°F degrees and the average daily maximum temperature is 83°F. The average total annual precipitation is 37.6 inches and the average seasonal snowfall is 34.7 inches. Numerous drums and containers were open and/or in poor condition, with visible evidence of spills. A weather-related release or migration of hazardous materials could have occurred due to the following factors: the structural condition of the building; the presence of containers in poor condition and/or open; and building leaks. In addition, because of the large number of broken windows at the Site, weather conditions causing freezing and thawing increased the risk of intact containers developing leaks and transformers breaking and leaking.

Further, as detailed above, sensitive aquatic populations in the Rock River downstream of the Site could be harmed if the aforementioned hazardous substances and ash entered the water column through spills or flooding.

**d. Threat of fire or explosion**

Liquid sample LH-WL07-120413 had a flashpoint of 165 °F. This container and others observed in the Site building were labeled "Flammable" and may have contained materials that ignite when moderately heated or exposed to relatively high ambient temperatures. If such an event had occurred, contaminants could become airborne and affect the nearby population.

An approximately 10-gallon container of sodium hydrosulfite was observed on the first floor in the west section of the building, near the area where trespassers started a fire on August 18, 2013, and less than 10 feet from an approximately 200-gallon AST from which waste liquid sample LH-WL01-120413 was collected, which had a pH of 0.15 SU. Sodium hydrosulfite is a spontaneously combustible solid and an oxidizing material. Sodium hydrosulfite is reactive with acids, oxidizing agents, and moisture and can react violently with water to emit toxic gases, or it may become self-reactive under conditions of shock or increase in temperature or pressure. Sodium hydrosulfite is also air sensitive and will oxidize in air (more readily in the presence of moisture or when in solution) to bisulfite. The proximity of this container to strong acids and to an area where historic vandalism (fire) has occurred represented a threat of fire or explosion at the Site.

Although the City of Sterling had locked the doors and installed concrete barriers, trespassers continued to gain access to the building, presenting a threat of fire or explosion from arson.

- e. **The availability of other appropriate federal or state response mechanisms to respond to the release**

IEPA does not have the resources to mitigate the threat of release.

#### **IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature and concentrations of the hazardous substances and pollutants present on the Site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances and pollutants from the Lawrence Hardware Site, if not addressed by implementing the response actions selected in this Action Memorandum, may have presented an imminent and substantial endangerment to public health, or welfare, or the environment.

#### **V. PROPOSED ACTIONS AND ESTIMATED COSTS.**

##### **A. Proposed Actions**

##### **1. Proposed action description**

The purpose of the emergency removal action was to mitigate the immediate threats posed to public health, welfare, or the environment by the presence in containers of sulfuric acid, cyanide, xylene, naphthalene, elemental mercury, PCBs, and about 100 cubic yards of ash.

Removal activities included: 1) hazard categorization for disposal of all wastes in containers, drums, and waste piles; 2) consolidation (as appropriate) of waste for disposal; 3) over packing of drums and smaller containers for disposal; 4) staging of waste for transport and disposal off-site in a CERCLA approved facility; 5) containment of the ash pile to prevent its release into the environment. Also, the removal included:

- a. Development and implementation of a Site-specific Health and Safety Plan, Sampling Plan, Work Plan and Contingency Plan;
- b. Implementing Site security measures as necessary;
- c. Inventorying and performing hazard characterization on all substances contained in containers, drums, vats, sweepings, unknown materials, and tanks, including ash piles;
- d. Consolidation and packaging all hazardous substances, pollutants and contaminants for transportation and off-site disposal as appropriate;
- e. Transport and disposal of all characterized or identified hazardous substances, pollutants, wastes, or contaminants that pose a substantial threat of release at a RCRA/CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 CFR § 300.440); and
- f. Containment of the ash pile to prevent its release into the environment.

The emergency removal actions were taken in a manner not inconsistent with the NCP. If necessary, the OSC will initiate planning for provision of post-removal site control consistent with the provisions of NCP Section 300.415(l). Because this removal action contemplated complete removal from the Site of all hazardous substances that present a potential exposure risk to any future residents or construction workers, no post-removal site control is anticipated.

#### Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal were treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

#### **2. Contribution to remedial performance:**

The action will not impede future actions based on available information.

#### **3. Engineering Evaluation/Cost Analysis (EE/CA)**

Not Applicable

#### **4. Applicable or relevant and appropriate requirements (ARARs)**

All applicable, relevant, and appropriate requirements (ARARs) of federal and state law were complied with to the extent practicable considering the exigencies of the circumstances.

#### Federal

RCRA Subtitle C

#### State

In February 13, 2014, EPA contacted Bruce Everetts, Office of Site Evaluation Division of Remediation Management, and Bureau of Land at the Illinois EPA to request the identification of any state ARARs.

#### **5. Project Schedule**

EPA estimated that the activities described in this memorandum would require 21 on-site days to complete.

#### **B. Estimated Costs**

The detailed cleanup contractor cost is presented in Attachment 1 and the Independent Government Cost Estimate is presented in Attachment 3. Estimated project costs are summarized below:

REMOVAL ACTION PROJECT CEILING ESTIMATE	
<b><u>Extramural Costs:</u></b>	
<u>Regional Removal Allowance Costs:</u>	
Total Cleanup Contractor Costs (This cost category includes estimates for ERRS, subcontractors, Notices to Proceed, and Interagency Agreements with Other Federal Agencies. Includes a 20% contingency)	\$48,294
<u>Other Extramural Costs Not Funded from the Regional Allowance:</u>	
Total START, including multiplier costs	\$0
Total Decontamination, Analytical & Tech. Services (DATS)	
Total CLP	
Subtotal	
<b>Subtotal Extramural Costs</b>	<b>\$48,294</b>
Extramural Costs Contingency (est. 13.8% of Subtotal, Extramural Costs)	\$6,664
<b>TOTAL REMOVAL ACTION PROJECT CEILING (rounded)</b>	<b>\$55,000</b>

The response actions described in this memorandum directly addressed the threatened release of hazardous substances and a pollutant at the Lawrence Hardware Site. These response actions did not impose a burden on affected property disproportionate to the extent to which that property contributed to the conditions addressed.

#### **VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Delayed or non-action at the Site would have increased the potential for the off-site migration of the hazardous wastes, hazardous substances, and pollutant present. In addition, delayed or non-action at the Site would have increased the potential for trespassers and/or vandals to experience inhalation of, or direct contact exposures to, the hazardous wastes and hazardous substances at the Site.

#### **VII. OUTSTANDING POLICY ISSUES**

There are no outstanding policy issues.

#### **VIII. ENFORCEMENT**

For administrative purposes, information concerning the enforcement strategy for this Site is contained in an Enforcement Confidential Addendum.

EPA estimated that the total costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are \$188,396<sup>1</sup>.

$$(\$55,000 + \$65,450) + (56.41\% \times \$120,450) = \$188,396$$

## IX. RECOMMENDATION

This decision document represents the selected emergency removal action for the Lawrence Hardware Site in Sterling, IL, developed in accordance with CERCLA, as amended by SARA, and is not inconsistent with the NCP. This decision was based upon the Administrative Record for the Site. Conditions at the Site meet the NCP Section 300.415(b) (2) criteria for a removal action, and I recommend your post-removal approval of the emergency removal action. The total project ceiling was \$55,000 with as much as \$55,000 used for cleanup contractor costs.

You may indicate your decision by signing below.

APPROVE:

  
\_\_\_\_\_  
Director, Superfund Division

DATE:

8-12-14

DISAPPROVE:

\_\_\_\_\_  
Director, Superfund Division

DATE:

## Enforcement Addendum

### Attachments:

Attachment 1 Site /Location Map.

Attachment 2 Sensitivity Atlas, Legend, U.S. FWS Recommendation Letter

Attachment 3 Detailed Cleanup Contractor Cost Estimate

Attachment 4 Independent Government Cost Estimate

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<sup>1</sup>Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.



Attachment 5 Administrative Record

cc: S. Fielding, EPA 5202 G (email: Fielding.Sherry/DC/USEPA/US)  
V. Darby, U.S. DOI, **w/o Enf. Addendum**  
(email: Valencia\_Darby@ios.doi.gov)  
L. Nelson, U.S. DOI, **w/o Enf. Addendum**  
(email: lindy\_nelson@ios.doi.gov)  
B. Everetts, Illinois EPA, **w/o Enf. Addendum**

**BCC PAGE HAS BEEN REDACTED**

**NOT RELEVANT TO SELECTION  
OF REMOVAL ACTION**

**ENFORCEMENT ADDENDUM**

**HAS BEEN REDACTED – TWO PAGES**

**ENFORCEMENT CONFIDENTIAL**

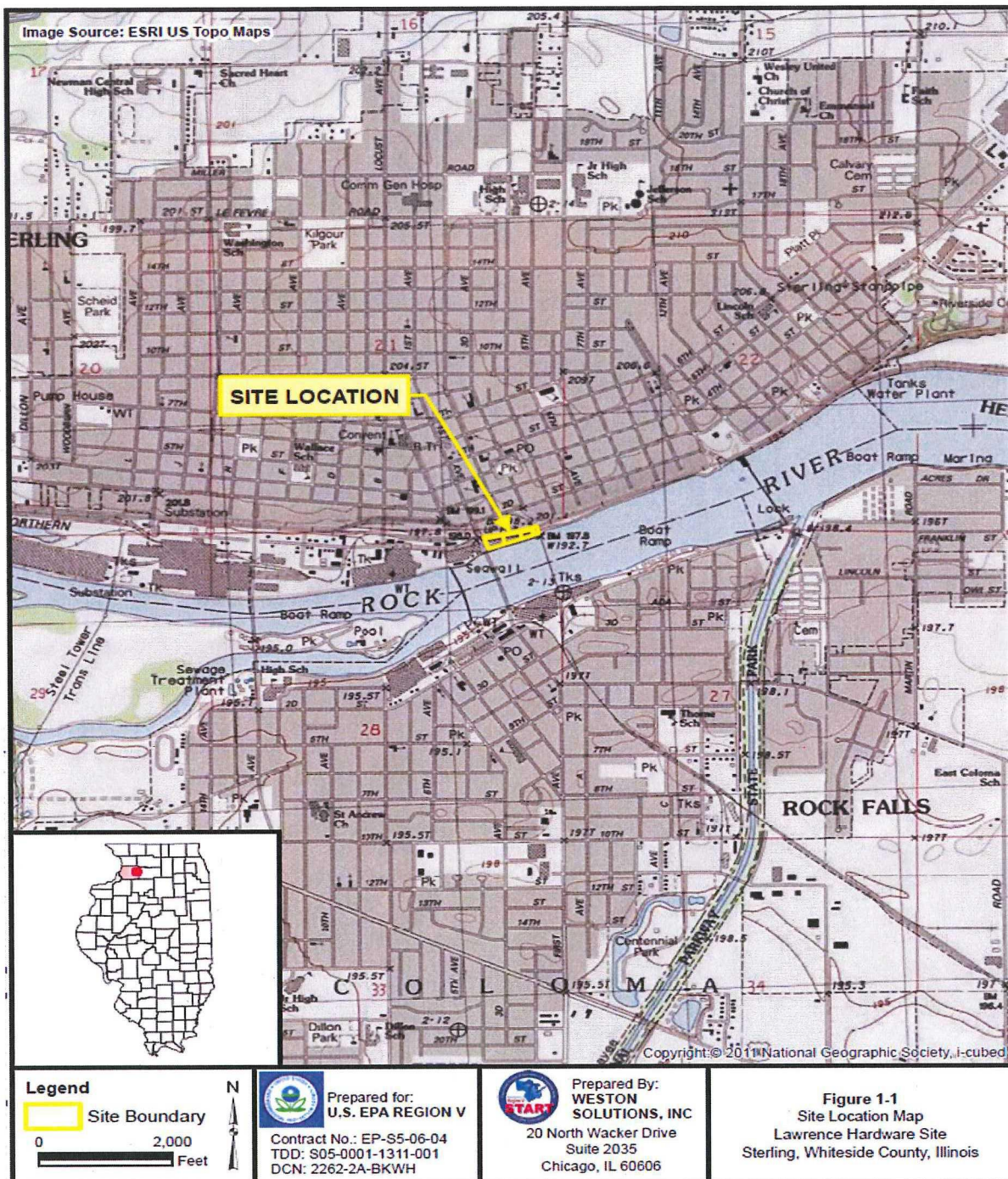
**NOT SUBJECT TO DISCOVERY**

**FOIA EXEMPT**

**NOT RELEVANT TO SELECTION**

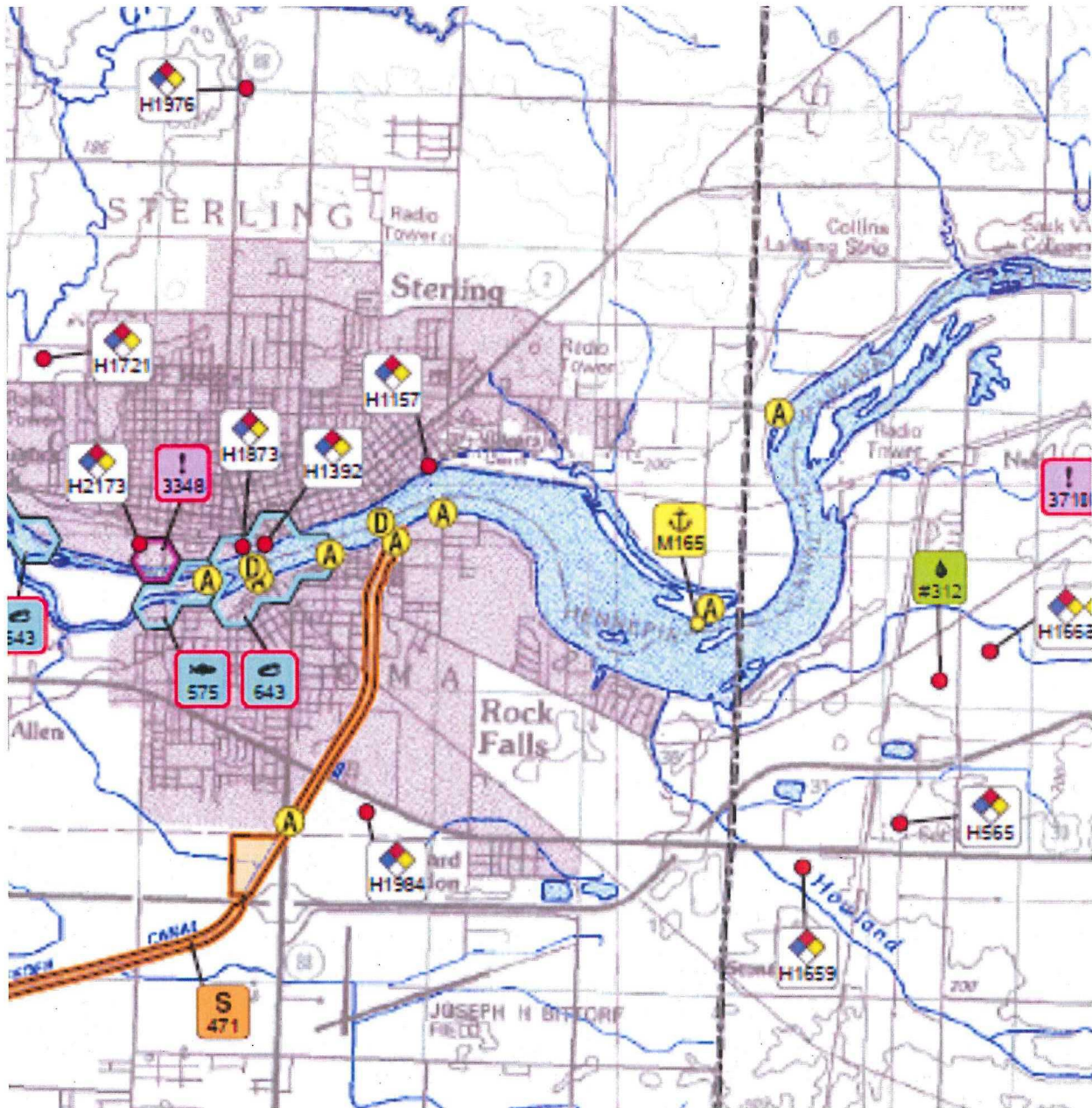
**OF REMOVAL ACTION**

# Attachment I: Site Location/Map





ATTACHMENT II : Sensitivity Atlas, Legend, U.S. Fish and Wildlife Recommendation



## MAP LEGEND

### SENSITIVE SPECIES

#### Aquatic/Riparian Zone

-  Plant
-  Bird
-  Amphibian and/or Reptile
-  Mammal
-  Invertebrate
-  Fish
-  Natural Community

#### Terrestrial Zone

-  Plant
-  Bird
-  Amphibian and/or Reptile
-  Mammal
-  Invertebrate
-  Natural Community

#### Multiple Species Grouping

#### Icon Indicating Threatened or Endangered Status

### NATURAL RESOURCE AREAS

#### Federal Managed Area

#### State Managed Area

#### Regional Managed Area

#### Private Managed Area

#### Other Environmentally Sensitive Aquatic Area

#### Other Environmentally Sensitive Terrestrial Area

#### Sole Source Aquifers

#### Tribal Land

#### Federal Designated Area


#### State Designated Area

#### Regional Designated Area





#### Private Designated Area

#### Trout Stream




### OTHER SENSITIVE RESOURCES

-  Marina
-  Navigational Lock or Dam
-  Water Intake (nonpotable)
-  Water Intake (potable)

### POTENTIAL SPILL SOURCES

-  Fixed Oil Storage Facility
-  Marine Transfer Facility and/or Facility with more than 1 million gallons
-  Hazardous Materials Site
-  Pipeline

### RESPONSE CONSIDERATIONS

-  Boat Access
-  Non-navigational Dam
-  Historic Site (Data only, not shown on maps)

### SHORELINE SENSITIVITY

-  Low Sensitivity
-  Low-Medium Sensitivity
-  Medium-High Sensitivity
-  High Sensitivity

### RESPONSE STRATEGIES

-  Containment Site
-  Diversion Site
-  Exclusion Site
-  Other Site
-  Boom Cache
-  Outfall Site

### BOUNDARY DESIGNATIONS

-  County Boundary
-  EPA/Coast Guard Jurisdictional Boundary
-  Pipeline Inset Boundary



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Chicago Ecological Services Field Office  
1250 South Grove Avenue, Suite 103  
Barrington, Illinois 60010  
Phone: (847) 381-2253 Fax: (847) 381-2285

IN REPLY REFER TO:  
FWS/AES-CIFO.

February 21, 2014

Mr. Ramon Mendoza  
United States Environmental Protection Agency  
77 W. Jackson Blvd.  
Chicago, IL 60604

Dear Mr. Mendoza:

This is in response to your request for information on sensitive aquatic species present in the Rock River downstream of the Lawrence Hardware site, Sterling, Illinois. Abandoned waste including acid, cyanide, used oil, and a 100 cubic yard ash pile are present at this site, which is located in the river floodplain.

The federally endangered sheepsnose mussel (*Plethobasus cyphus*), has been found approximately 6 miles downstream of the site. The state threatened black sandshell mussel (*Ligumia recta*) has been located downstream in closer proximity to the site.

Please take action to prevent release of the acid, cyanide, oil and ash into the river. If these substances enter the water column they could cause harm to these mussels and other aquatic species. The large volume of ash could coat the river bottom in depositional areas, bury aquatic organisms, and interfere with the function of gill tissues in mussels and fish.

Please contact me if you have any questions or need additional information.

Sincerely,

Edward Karecki

**ATTACHMENT III**

**DETAILED CLEANUP CONTRACTOR ESTIMATE**

**HAS BEEN REDACTED – ONE PAGE**



**ATTACHMENT IV**

**INDEPENDENT GOVERNMENT COST ESTIMATE**

**HAS BEEN REDACTED – THREE PAGES**

**NOT RELEVANT TO SELECTION**

**OF REMOVAL ACTION**

Attachment 5

U.S. Environmental Protection Agency  
Removal Action

Administrative Record  
for the  
**Lawrence Hardware Site**  
Sterling, Whiteside County, Illinois

Original  
July, 2014  
SEMS ID:

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	912926	11/21/13	Shumard, S., City of Sterling	U.S. EPA	Access Agreement for Lawrence Hardware	1
2	912935	1/31/14	Ross, S., Weston START	Mendoza, R., U.S. EPA	Site Assessment Report for the Lawrence Hardware Site	169
3	913862	2/21/14	Karecki, E., U.S. Fish and Wildlife Service	Mendoza, R., U.S. EPA	Letter re: Sensitive Aquatic Species Downstream of the Lawrence Hardware Site	1
4	457116	6/16/14	Mendoza, R., U.S. EPA	Distribution List	Pollution Report (POLREP) # 4 - Final	8
5	-	-	Mendoza, R., U.S. EPA	Borries, S., U.S. EPA	Action Memorandum re: Request for Approval and Funding for an Emergency Removal Action at the Lawrence Hardware Site (PENDING)	-